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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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KAVIRAJ SINGH

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EXAMINER

TANG, KENNETH

ART UNIT

PAPER NUMBER

2195

DATE MAILED: 06/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/346,194	<b>Applicant(s)</b> SINGH ET AL.	
	<b>Examiner</b> Kenneth Tang	<b>Art Unit</b> 2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 March 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-17, 19-26, 28 and 29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-17, 19-26, and 28-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This action is in response to the Amendment filed on 1/17/06. Applicant's arguments have been fully considered but are moot in view of the new grounds of rejections.
2. Claims 2-17, 19-26, and 28-29 are presented for examination.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claim 2-17, 19, 21-26, and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohmura et al. (hereinafter Ohmura) (US 6,151,583) in view of Chatterjee et al. (hereinafter Chatterjee) (US 6,430,538 B1), and further view of Du et al. (hereinafter Du) (US 6,078,982).**
4. As to claim 2, Ohmura teaches a computer-readable medium having computer-executable instructions to cause a computing system to perform a method comprising:  
  
creating a data table (process table) (*Fig. 1, 900*) in a server database (*col. 8, lines 16-30*);  
  
creating a workflow table (work management table) (*Fig. 1, 1100*) as part of a database schema in the server database, wherein the workflow table is associated with the data table,

wherein each row in the workflow table represents a workflow step containing workflow rules and associated code (*col. 5, lines 38-56, claim 28*);

receiving a data modification request in the server database (*col. 12, lines 32-54*);

evaluating a condition and executing an action for at least one workflow step (*col. 8, lines 16-30 or see Fig. 10 or Fig. 11, col. 12, lines 12-31*).

5. Ohmura fails to explicitly teach the use of script functions and invoking a workflow engine using server database triggers. Chatterjee teaches rule engine that processes workflow based on rules and a script engine (handler) that handles the script functions (*col. 3, lines 42-51*), wherein there are triggers (or actions initiated/fired) in a table of an SQL database based (from analysis) on the rules (*col. 4, lines 54-67 through col. 5, lines 1-6*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Ohmura with Chatterjee because it would benefit by having the existing workflow system be an automated one (*col. 1, lines 30-49*). Chatterjee and Ohmura are in the same field of endeavor of workflow systems in a networked environment.

6. Ohmura and Chatterjee are silent in having workflow events that include at least one timeout event. However, Du teaches a workflow database management system with a timeout event that can trigger a workflow event when the timeout occurs (timeout and deadline information) (*col. 6, lines 1-16, Abstract, etc.*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Du with Ohmura and Chatterjee because it would improve control capabilities of the workflow system (*col. 1, lines 15-26, col. 2, lines 15-31, etc.*).

7. As to claim 3, Chatterjee teaches wherein evaluating a condition and executing an action for at least one workflow step includes using a script engine which is invoked by the workflow engine (*col. 3, lines 42-51*).

8. As to claim 4, it is rejected for the same reasons as stated in the rejection of claim 2. In addition, Ohmura's invention has an extended store in the workflow server (*Fig. 1, 101*) or the workflow clients (*Fig. 1, 102*) and the workflow table comprises at least part of an extended database schema.. In Chatterjee, the Database Server provides an extended store, for example, and the Script Handler/Engine is coupled to the Workflow/Rule Engine as well as the Workflow/Rule engine coupled to the server database and to the workflow extended store (*see Fig. 2*).

9. As to claim 5, Ohmura teaches wherein the workflow table is communicatively coupled to the workflow engine (*see Abstract and Fig. 1 and col. 3, lines 43-51 and col. 5, lines 14-27*). Chatterjee also teaches this in *col. 5, lines 14-33*.

10. As to claim 6, Chatterjee teaches wherein each column in the data table comprises a workflow state (*col. 5, lines 27-33*).

11. As to claim 7, Chatterjee teaches wherein each row in the workflow table comprises a workflow step (*col. 5, lines 14-26*).

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12. As to claim 8, Chatterjee teaches wherein the workflow table comprises a set of workflow rules and associated code to be executed by the workflow engine, wherein a workflow table is defined for each data table that needs to enforce integrity of data changes (*col. 3, lines 42-51, col. 4, lines 54-67 col. 5, lines 14-33*).

13. As to claim 9, Chatterjee teaches wherein the extended store comprises a data set having the necessary information to enforce a workflow step (*col. 5, lines 14-33*).

14. As to claim 10, Chatterjee teaches wherein the workflow engine receives information on a workflow event from the extended store and maps the information against a cached copy of the workflow table and executes an appropriate workflow step (*col. 3, lines 60-67 through col. 4, lines 1-3*).

15. As to claim 11, it is rejected for the same reasons as stated in the rejection of claim 4 above.

16. As to claim 12, Chatterjee teaches wherein each workflow step is triggered by a workflow event selected from the group comprising state events and transition events (see Fig. 5, e.g.) but fails to explicitly teach including timeout events. However it is well known in the art and obvious to have timeout events because it allows for an exit to a command in the system, which is a desirable feature.

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17. As to claim 13, Chatterjee teaches wherein a state event is associated with a single workflow state and is executed every time the event associated with the workflow state is triggered (*col. 5, lines 27-33*).

18. As to claim 14, Ohmura (*Fig. 10, e.g.*) and Chatterjee (*Fig. 5, e.g.*) teaches wherein the execution of a state event depends on how a workflow state is entered or exited.

19. As to claim 15, Chatterjee teaches wherein a transition event is associated with a change from a current workflow state to a new workflow state, wherein the current and the new workflow states are defined by a transition workflow step, wherein the transition event is executed upon a requested state transition where the current and the new workflow state match the transition workflow step (*col. 5, lines 27-67, col. 7, lines 1-16, Fig. 5*). Ohmura teaches this in Fig. 10, e.g.

20. As to claim 16, it is rejected for the same reasons as stated in the rejection of claim 12.

21. As to claim 17, it is rejected for the same reasons as stated in the rejection of claims 2 and 4. Although a timeout agent is silent in Du, it is inherent that the timeout agent is whatever performs the timeout in Du.

22. As to claim 19, Chatterjee teaches wherein the system further includes a session object communicatively coupled to the server database, wherein the session object comprises a set of

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properties for a workflow event, a set of data on the current user, a database user list, and a data set of user permission (*col. 3, lines 52-67, e.g.*).

23. As to claim 21, it is rejected for the same reasons as stated in the rejection of claim 12. It is inherent that if there is a timeout, there is an agent or something that performs the timeout.

24. As to claim 22, it is rejected for the same reasons as stated in the rejection of claim 21. In addition, Ohmura teaches an update in the data table and triggers an association workflow action upon timeout workflow events which define a state transition (*col. 9, lines 61-67 through col. 10, lines 1-13, Fig. 10*).

25. As to claim 23, it is rejected for the same reasons as stated in the rejection of claim 2.

26. As to claim 24, Ohmura (*see Abstract, e.g.*) and Chatterjee (*col. 3, lines 52-59 and col. 5, lines 50-67*) both teach wherein invoking the workflow engine includes comparing the data modification request with a workflow definition in the workflow table and determining the appropriate workflow step to be executed.

27. As to claim 25, Ohmura teaches wherein evaluating a condition and executing an action for each workflow step includes checking execution permissions on each workflow step (*col. 7, lines 1-19, e.g.*).



28. As to claim 26, Chatterjee teaches wherein creating a workflow table defining a condition and an action for each workflow step using script functions (*col. 12, lines 12-23*) and Ohmura teaches that each row in the workflow table represents a workflow step (*col. 5, lines 38-56, claim 28*).

29. As to claim 28, Ohmura teaches wherein evaluating a condition and executing an action for each workflow step includes committing the data modification request to the data table in the server database (*col. 12, lines 32-54, e.g.*).

30. As to claim 29, it is rejected for the same reasons as stated in the rejection of claim 4. In addition, both Ohmura and Chatterjee disclose a computer that has a processor and a computer-readable medium (*see Abstracts*).

**31. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohmura et al. (hereinafter Ohmura) (US 6,151,583) in view of Chatterjee et al. (hereinafter Chatterjee) (US 6,430,538 B1), in view of Du et al. (hereinafter Du) (US 6,078,982), and further in view of Haverstock et al. (hereinafter Haverstock) (US 2002/0038357 A1).**

32. As to claim 20, Chatterjee teaches a workflow system with script functions operating with session objects. Chatterjee and Ohmura fails to explicitly teach the workflow tasks including sending email and finding a user's manager. However, Haverstock teaches a workflow

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system that uses the transmission of electronic mail messages to a system user as a notification to inform the manager ([0027]). It is inherent that it is necessary to find the user's manager in order to be able to inform the manager. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of the workflow tasks including sending email and finding a user's manager because the notification would allow appropriate action to be taken in response ([0027]).

### ***Response to Arguments***

33. Applicant's arguments have been fully considered but are moot in view of the new grounds of rejections.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (571) 272-3772. The examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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